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**REMARKS**

Claims 1-30 have been examined and have been rejected under 35 U.S.C. § 103(a).  
Claims 10, 14, 15 and 26 have been canceled without prejudice, therefore, the rejection of such claims are moot.

**I. Rejection under 35 U.S.C. § 103(a) over U.S.P. 4,760,409 to Kiyohara et al.  
("Kiyohara")**

Claims 1-30 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kiyohara.

**A. Claim 1**

Applicant submits that claim 1 is not rendered obvious over Kiyohara. For example, as recited in the claim, a contact prevention member is provided within and attached to an interior surface of an ink pack to prevent close contact between the interior surfaces of the ink pack. The Examiner maintains that Kiyohara suggests such a feature. However, Applicant believes the Examiner is misinterpreting and/or misapplying the reference.

The Examiner contends that ribs 21 (Figure 4) of Kiyohara correspond to the claimed contact prevention member. However, ribs 21 are not attached to an interior surface of the ink pack. In Kiyohara, the plug member 11 (Figure 4) is attached to the ink outlet portion of the ink bag (col. 3, lines 17-19). The ribs 21 (Figure 4) jut inwardly from the plug member 11 to prevent the ink bag from collapsing when it comes into contact with the plug member 11. Moreover, the

ribs 21 are formed integrally with the plug member 11 (col. 4, lines 59-66). Therefore, contrary to the Examiner's assertion, ribs 21 do not correspond to the contact prevention member as claimed.

The Examiner acknowledges that Kiyohara does not disclose the contact prevention member (rib 21) disposed at a location that is separated from an outer edge of the ink pack as claimed, but maintains that the shape and design of such feature is notoriously well known in the art. However, as explained above, ribs 21 do not correspond to the claimed contact prevention member, therefore, this argument is moot.

Accordingly, Applicant submits that claim 1 is patentable over the cited reference and respectfully requests the Examiner to withdraw the rejection.

**B. Claims 2-7**

Since claims 2-7 are dependent on claim 1, Applicant submits that such claims are patentable at least by virtue of their dependency.

**C. Claim 8**

Applicant submits that claim 8 is not rendered obvious over Kiyohara. For example, as recited in the claim, an ink flow passage bulging outwardly is formed on at least one interior surface of an ink pack. The Examiner maintains that Kiyohara suggests such a feature, although no citation in Kiyohara has been provided where such a feature is disclosed. However, as discussed above for claim 1, ribs 21 are not attached to or formed on an interior surface of the

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ink pack, rather, they are attached to a plug member 11 (col. 4, lines 59-66). Therefore, ribs 21 do not correspond to the ink flow passages of claim 8.

Accordingly, Applicant submits that claim 8 is patentable over the cited reference and respectfully requests the Examiner to withdraw the rejection.

**D. Claim 9**

Since claim 9 contains features that are similar to the features recited in claim 8, Applicant submits that claim 9 is patentable for at least similar reasons.

**E. Claim 11**

Since claim 11 is dependent on claim 8 or 9, Applicant submits that such claim is patentable at least by virtue of its dependency.

**F. Claims 12 and 13**

Since claims 12 and 13 contain features that are similar to the features recited in claim 8, Applicant submits that claims 12 and 13 are patentable for at least similar reasons.

**G. Claim 16**

Applicant submits that claim 16 is not rendered obvious over Kiyohara. For example, as recited in the claim, a protrusion or a recess is attached to the interior surface of an ink storage pack. The Examiner maintains that Kiyohara suggests such a feature, although no citation in Kiyohara has been provided where such a feature is disclosed. However, as discussed above for claim 1, ribs 21 are not attached on an interior surface of the ink pack, rather, they are attached to

a plug member 11 (col. 4, lines 59-66). Therefore, ribs 21 do not correspond to the protrusion and/or recess of claim 16.

Accordingly, Applicant submits that claim 16 is patentable over the cited reference and respectfully requests the Examiner to withdraw the rejection.

**H. Claim 17**

Since claim 17 is dependent on claim 16, Applicant submits that such claim is patentable at least by virtue of its dependency.

**I. Claim 18**

Since claim 18 contains features that are similar to the features recited in claim 16, Applicant submits that claim 18 is patentable for at least similar reasons.

**J. Claims 19-24**

Since claims 19-24 are dependent on claim 16, Applicant submits that such claims are patentable at least by virtue of their dependency.

**K. Claim 25**

Since claim 25 is dependent on claim 8, Applicant submits that such claim is patentable at least by virtue of its dependency.

**L. Claims 27 and 28**

Since claims 27 and 28 are dependent on claim 1, Applicant submits that such claims are patentable at least by virtue of their dependency.

**M. Claim 29**

Since claim 29 contains features that are similar to the features recited in claim 1, Applicant submits that claim 29 is patentable for at least similar reasons.

**N. Claim 30**

Since claim 30 is dependent on claim 29, Applicant submits that such claim is patentable at least by virtue of its dependency.

**II. Rejection under 35 U.S.C. § 103(a) over JP 59204566 to Yamazaki (“Yamazaki”)**

Claims 1-30 have also been rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamazaki.

**A. Claim 1**

Applicant submits that claim 1 is patentable over Yamazaki. For example, as recited in the claim, a contact prevention member is attached to an interior surface of an ink pack and is disposed at a location that is separated from an outer edge of the ink pack.

The Examiner maintains that Yamazaki discloses the claimed contact prevention member. However, as shown in Figure 3, the wall part 3 extends to an outer edge on each side of the ink bag. Also, Figure 4 shows recessed groove portions 4 which extend all the way to ink outlet tube 2, which constitutes an outer edge of the ink bag. Therefore, since the wall part 3 and

recessed groove portions 4 contact an outer edge of the ink bag, Yamazaki does not teach or suggest the features of claim 1.

In addition, the Examiner maintains that selecting the physical size, shape and the position for the contact prevention members within the ink pack is considered to be a matter of design choice and well known in the art. However, Applicant respectfully disagrees and believes that the Examiner's unsupported reliance on the "obvious design choice" rationale is improper and does not satisfy the requirements of 35 U.S.C. § 103. "The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device." *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984); MPEP § 2144.04 (VI)(C). Consequently, the Examiner has not provided any motivation to perform the asserted changes or rearrangement of parts to the ink bag of Yamazaki.

Accordingly, Applicant submits that claim 1 is patentable and respectfully requests the Examiner to withdraw the rejection.

**B. Claims 2-4**

Since claims 2-4 are dependent upon claim 1, Applicant submits that such claims are patentable at least by virtue of their dependency.

**C. Claims 5-7**

Applicant submits that claims 5-7 are not obvious over the cited reference. Specifically, claims 5-7 recite a rod member fixed to one interior surface of the ink pack. Since Figures 1-6 of Yamazaki do not suggest a separate attachment, i.e. a rod member, and the Examiner's statement concerning design choice is improper, Applicant submits that claims 5-7 are patentable.

In addition to the above, since claims 5-7 depend from claim 1, Applicant submits that such claims are patentable at least by virtue of their dependency.

**D. Claim 8**

Applicant submits that claim 8 is patentable over Yamazaki. For example, as recited in the claim, an ink flow passage is formed from at least one interior surface of an ink pack and is disposed at a location that is separated from an outer edge of the ink pack.

The Examiner maintains that Yamazaki discloses the claimed ink flow passage. However, as shown in Figure 3, the wall part 3 extends to an outer edge on each side of the ink bag. Also, Figure 4 shows recessed groove portions 4 which extend all the way to ink outlet tube 2, which constitutes an outer edge of the ink bag. Therefore, Yamazaki does not teach or suggest that wall part 3 or recessed groove portions 4 are at a location which is separate from the outer edge, as required by the claim.

In addition, the Examiner maintains that selecting the physical size, shape and the position for the contact prevention members within the ink pack is considered to be a matter of



design choice and well known in the art. However, as stated previously in reference to claim 1, Applicant respectfully disagrees and believes that the Examiner's unsupported reliance on the "obvious design choice" rationale is improper and does not satisfy the requirements of 35 U.S.C. § 103.

Accordingly, Applicant submits that claim 8 is patentable and respectfully requests the Examiner to withdraw the rejection.

**E. Claim 9**

Since claim 9 contains features that are similar to the features recited in claim 8, Applicant submits that claim 9 is patentable for at least similar reasons.

**F. Claim 11**

Since claim 11 is dependent on claims 8 or 9, Applicant submits that such claim is patentable at least by virtue of its dependency.

**G. Claims 12 and 13**

Since claims 12 and 13 contain features that are similar to the features recited in claim 8, Applicant submits that claims 12 and 13 are patentable for at least similar reasons.

**H. Claim 16**

Applicant submits that claim 16 is patentable over Yamazaki. For example, in claim 16, a protrusion and/or a recess is provided to an interior surface of an ink pack. The protrusion and/or recess is positioned at a location that is separated from an outer rectilinear edge of an ink storage chamber.

The Examiner maintains that Yamazaki discloses the claimed protrusion and/or recess. However, as shown in Figure 3, the wall part 3 extends to an outer edge on each side of the ink bag. Also, Figure 4 shows recessed groove portions 4 which extend all the way to ink outlet tube 2, which constitutes a rectilinear edge of the ink bag. Therefore, Yamazaki does not teach or suggest that wall part 3 or recessed groove portions 4 are attached at a location which is separate from the outer rectilinear edge, as required by the claim.

In addition, the Examiner maintains that selecting the physical size, shape and the position for the contact prevention members within the ink pack is considered to be a matter of design choice and well known in the art. However, as stated previously in reference to claim 1, Applicant respectfully disagrees and believes that the Examiner's unsupported reliance on the "obvious design choice" rationale is improper and does not satisfy the requirements of 35 U.S.C. § 103.

Accordingly, Applicant submits that claim 16 is patentable and respectfully requests the Examiner to withdraw the rejection.

**I. Claim 17**

Since claim 17 depends on claim 16, Applicant submits that such claim is patentable at least by virtue of its dependency.

**J. Claim 18**

Since claim 18 contains features that are similar to the features recited in claim 16, Applicant submits that claim 18 is patentable for at least similar reasons.

**K. Claims 19 and 20**

Since claims 19 and 20 are dependent on claim 16, Applicant submits that such claims are patentable at least by virtue of their dependency.

**L. Claims 21-24**

Since claims 21-24 are dependent on claim 16, Applicant submits that such claims are patentable at least by virtue of their dependency.

**M. Claim 25**

Since claim 25 is dependent on claim 8, Applicant submits that such claim is patentable at least by virtue of its dependency.

**N. Claims 27 and 28**

Since claims 27 and 28 are dependent on claim 1, Applicant submits that such claims are patentable at least by virtue of their dependency.

**O. Claim 29**

Since claim 29 contains features that are similar to the features recited in claim 1, Applicant submits that claim 29 is patentable for at least similar reasons.

**P. Claim 30**

Since claim 30 is dependent on claim 29, Applicant submits that such claim is patentable at least by virtue of its dependency.

### III. Newly Added Claims

Applicant has added claim 31 to provide more varied protection for the present invention. Since claim 31 contains features similar to those recited in claim 8, Applicant submits that such claim is patentable for at least similar reasons.

### IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: March 12, 2003

**APPENDIX**

**VERSION WITH MARKINGS TO SHOW CHANGES MADE  
IN THE CLAIMS:**

**Claims 10, 14, 15 and 26 are canceled without prejudice or disclaimer.**

**The claims are amended as follows:**

8. (Twice amended) An ink cartridge for use with a recording apparatus,  
comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible  
material; and

a case housing the ink pack and constituting an outer shell of the cartridge;

wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the  
flattened ink pack are oriented in a substantially vertical state, [and]

wherein an ink flow passage bulging outwardly of the ink pack is formed from at least  
one of interior surfaces of the flexible material constituting the ink pack to extend along a gravity  
direction lower side of the ink pack[.], and

wherein the ink flow passage is disposed at a location that is separated from an outer edge  
of the ink pack.

9. (Twice amended) An ink cartridge for use with a recording apparatus,  
comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible

material; and

a case housing the ink pack and constituting an outer shell of the cartridge;

wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a substantially vertical state,

wherein an ink flow passage bulging outwardly of the ink pack is formed on at least one of interior surfaces of flexible material constituting the ink pack to extend along a gravity direction lower side of the ink pack, [and]

wherein the ink flow passage is formed by press-forming flexible material constituting the ink pack[.], and

wherein the ink flow passage is disposed at a location that is separated from an outer edge of the ink pack.

11. (Once Amended) The ink cartridge according to [any one of] claims 8 [through 10] or 9, wherein the case is formed hermetically, and air pressure can be applied from a recording apparatus to an interior of the case to pressurize the ink pack when the ink cartridge is loaded to the recording apparatus.

12. (Twice amended) An ink cartridge for use with a recording apparatus, comprising:  
an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material; and

a case housing the ink pack and constituting an outer shell of the cartridge;

wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a substantially horizontal state, [and]

wherein ink flow passages bulging outwardly of the ink pack are formed from at least one of interior surfaces of the flexible material constituting the ink pack to extend along respective sides of the ink pack perpendicular to a side in which an ink outlet port is formed, and

wherein each of the ink flow passages is separate from an outer edge of the ink pack.

13. (Twice amended) An ink cartridge for use with a recording apparatus, comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material; and

a case housing the ink pack and constituting an outer shell of the cartridge;

wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a substantially horizontal state,

wherein ink flow passages bulging outwardly of the ink pack are formed on at least one of interior surfaces of flexible material constituting the ink pack to extend along respective sides of the ink pack perpendicular to a side in which an ink outlet port is formed, [and]

wherein the ink flow passages are formed by press-forming flexible material constituting the ink pack, and

wherein each of the ink flow passages is separate from an outer edge of the ink pack.

16. (Twice amended) A flexible ink pack having opposing interior surfaces defining [a substantially rectangular]an ink storage chamber, the flexible ink pack comprising:

a plug member provided to a shorter side of the [substantially rectangular] ink storage chamber; and

a protrusion and/or recess provided to at least one of the interior surfaces of the ink pack, and elongated substantially along a longer side of the [substantially rectangular] ink storage chamber,

wherein the protrusion and/or recess is attached to the interior surface of the [substantially rectangular] ink storage chamber pack at a location that is separated from an outer rectilinear edge of the [substantially rectangular] ink storage chamber.

18. (Twice Amended) A flexible ink pack having opposing interior surfaces defining a [substantially rectangular] ink storage chamber, the flexible ink pack comprising:

a plug member provided to a shorter side of the [substantially rectangular] ink storage chamber; and

a protrusion and/or recess provided to at least one of the interior surfaces of the ink pack, and elongated substantially along a longer side of the [substantially rectangular] ink storage chamber and separated from an outer rectilinear edge,

wherein the recess is formed as a consequence of plastically deforming a part of a flexible film defining the one interior surface.



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**Claim 31 has been added as a new claim.**